REMARKS

STATUS OF THE CLAIMS

In accordance with the foregoing, claims have been amended. New claim 21 has been added. Claims 1-6 and 11-21 are pending and under consideration.

No new matter is being presented, and approval of the amended claims is respectfully requested.

REJECTIONS OF CLAIMS 1-3, 6 AND 7 UNDER 35 U.S.C. §102(e) AS BEING ANTICIPTED BY KANG (U.S. PATENT NO. 6,400,347)

The rejections of claims 1-3 and 6 are respectfully traversed and reconsideration is requested. Claim 7 is cancelled herein and, thus, the rejection thereof is considered moot.

In the Response to Arguments, on page 11 of the Action, the Examiner reiterates his interpretation of "load factor", as recited in claim 1, as the number of activated pixels of the R, B, G color signals, which the Examiner states is directly related to power consumption and brightness. Accordingly, the Examiner states that Kang discloses a drive unit which monitors a display load factor, as recited in claim 1, citing column 4, lines 40-60 of Kang.

The Examiner further states, in the Response to Arguments, that "measuring" brightness, as disclosed by Kang, is equivalent to "monitoring" a display load factor, as recited in claim 1.

Applicants assert, however, that the method for driving sustain lines for white balancing, as taught by Kang, is not dynamically controlled during the operation of the display panel. Thus, the white balancing of Kang does not include monitoring *a change of a display load factor* of the panel, as recited in amended independent claims 1-3. Kang, on the other hand, discusses merely taking a preliminary measurement of brightness.

Furthermore, Kang does not teach or suggest controlling to decrease a drive frequency of sustain discharges as the monitored display load factor increases, as recited in independent claims 1-3. The Examiner cites column 4, lines 40-60, of Kang as disclosing this feature; however, as stated above, Kang does not teach dynamically monitoring a change in a display load factor of the panel and, therefore, does not teach or even suggest decreasing a drive frequency of sustain discharges as the monitored display load factor increases.

Moreover, Independent claims 1-3 are amended herein to recite, "to increase the drive frequency of sustain discharges as the monitored change in the display load factor decreases". Since Kang does not teach monitoring a change of a display load factor, it also does not teach or even suggest increasing the drive frequency of sustain discharges as the monitored change in the display load factor decreases.

Therefore, it is respectfully submitted that independent claims 1-3 patentably distinguish over Kang. Claim 6 depends from claim 3 and inherits the patentable recitations thereof. Thus, it is respectfully submitted that dependent claim 6 patentably distinguishes over Kang for at least the reasons provided above for independent claim 3.

REJECTIONS OF CLAIMS 1-3, 11 AND 12 UNDER 35 U.S.C. §102(e) AS BEING ANTICIPATED BY KASAHARA ET AL. (U.S. PATENT NO. 6,331,843)

The rejections of claims 1-3, 11 and 12 are respectfully traversed and reconsideration is requested.

Similarly to Kang, Kasahara et al. (hereinafter "Kasahara") fails to teach or suggest controlling to decrease a drive frequency of sustain discharges as the monitored display load factor increases, as recited in claims 1-3. Kasahara also fails to teach or even suggest increasing the drive frequency of sustain discharges as the monitored change in the display load factor decreases.

The Examiner cites Kasahara column 3, lines 36-42, column 4, lines 31-41, and column 23, lines 24-45, as disclosing this feature. However, the cited portions of Kasahara merely teach adjusting brightness in accordance with the total drive pulse number in each pixel or the total drive pulse time and, when the average level of brightness becomes lower, increasing the weighting multiplier N so that the whole screen is made brighter. Thus, Kasahara does not teach or suggest *decreasing* the drive frequency of sustain discharges as the monitored display load factor *increases*.

Furthermore, the Examiner states that Kasahara teaches making a correction to change an intensity of the image signal of a predetermined color, independently of another color, depending on a change of the monitored display load factor, citing Kasahara column 20, lines 54-67, column 23, lines 54-67, and column 24, lines 7-14.

According to the present invention, in order to maintain good white balance, primary color signals are controlled, independently of one another, depending on the monitored change of display load factor.

Claim 1, for example, is amended herein to clarify that said drive unit makes a correction to change an intensity of the image signal of a predetermined color, independently of another color, depending on the monitored change of the display load factor, and drives all of the areas in the panel according to the corrected intensity of the one image signal, so that a ratio of the emission intensity of said fluorescent substance of each color during a white display is roughly the same when said display load factor is low and high.

On the other hand, however, Kasahara merely teaches a multiplier 12 that receives a multiplication factor A and multiplies the R, G, B signals A times. Therefore, "the entire screen becomes A-times brighter." (See column 24, lines 7-10).

Therefore, in Kasahara, brightness of the display panel is adjusted by adjusting the intensities of all colors simultaneously (by a factor of A). Thus, Kasahara does not teach or even suggest changing an intensity of the image signal of a predetermined color, independently of another color.

Therefore, it is respectfully submitted that independent claims 1-3 patentably distinguish over Kasahara.

Independent claim 11, as amended, recites a drive unit, which receives image signals of said different colors, drives areas of each of the colors in a pixel in the plasma display panel according to intensities of the image signals so as to have the areas emit light with emission intensities corresponding to the intensities of the image signals and changes the drive frequency of sustain discharges according to the estimated display load factor, and changing an intensity of one of the image signals of a predetermined color depending on a change of the estimated display load factor, and driving all of the areas in the panel according to the corrected intensity of the one image signal, so that a ratio of the emission intensity of each of the different colors during a white display is substantially equal regardless of the estimated display load factor.

Therefore, it is respectfully submitted that independent claim 11 also patentably distinguishes over Kasahara.

Claim 12 depends from claim 11 and inherits the patentability thereof. Thus, it is respectfully submitted that dependent claim 12 patentably distinguishes over the prior art.

REJECTIONS OF CLAIMS 11-12 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER KANG IN VIEW OF KASAHARA

The rejections of claims 11-12 are respectfully traversed and reconsideration is requested.

As stated above, amended independent claim 11 patentably distinguishes over Kasahara.

It is further submitted that Kang fails to teach or even suggest detecting a change of one of a power consumption of the plasma display panel or driving areas of each of the colors in a pixel in the plasma display panel according to intensities of the image signals so as to have the areas emit light with emission intensities corresponding to the intensities of the image signals and changes the drive frequency of sustain discharges according to the estimated display load

factor, and changing an intensity of one of the image signals of a predetermined color depending on a change of the estimated display load factor, as recited in amended independent claim 11.

Therefore, neither Kang nor Kasahara, alone or in combination, teaches or suggests the features of amended independent claim 11.

Claim 12 depends from claim 11 and inherits the patentability thereof. Thus, it is respectfully submitted that dependent claim 12 patentably distinguishes over the prior art.

REJECTIONS OF CLAIMS 8-10, 13 AND 14 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER KANG

Claims 8-10 are cancelled herein and, thus, the rejections thereof are considered moot. The rejections of claims 13 and 14 are respectfully traversed and reconsideration is requested.

Claims 13-14 depend from independent claim 11, which, as stated above, patentably distinguishes over Kang. Thus, it is respectfully submitted that dependent claims 13-14 also patentably distinguish over the prior art.

REJECTIONS OF CLAIMS 4, 5 AND 15-20 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER KANG IN VIEW OF KASAHARA AND NAGAI (U.S. 2002/10044105)

The rejections of claims 4, 5 and 15-20 are respectfully traversed and reconsideration is requested.

Claims 4 and 5 depend from claim 3, which, as stated above, patentably distinguishes over the prior art. Thus, it is respectfully submitted that dependent claims 4 and 5 patentably distinguish over the prior art.

Claims 15-20 depend from claim 11, which, as stated above, patentably distinguishes over Kang and Kasahara, alone or in combination. Thus, it is respectfully submitted that claims 15-20 patentably distinguish over the prior art.

It is further submitted that Nagai does not teach or suggest the features of independent claims 3 and 11, as described above.

NEW INDEPENDENT CLAIM 21.

New claim 21 recites:

> A method for controlling a drive of a plasma display panel, which includes an array of pixels having fluorescent substance areas of primary colors, each area discharging by an application of sustain voltage so as to emit light with brightness corresponding to a drive frequency of the sustain voltage, the method comprising:
>
> applying, in a display period, the sustain voltage to all of the fluorescent substances areas commonly so as to display a picture according to the light emitting

from the fluorescent substance areas which are addressed in an address period preceding the display period;

detecting a change of a display load factor, which changes depending on a number of addressed fluorescent substance areas, to output a control signal, and controlling dynamically the drive frequency of the sustain voltage according to the control signal; and

controlling dynamically at least one of primary color signals, representing colors of pixels to be displayed, according to a brightness correction signal corresponding to the control signal, so that a change of color balance of the primary colors of the fluorescent substances, which occurs according to the change of drive frequency of the sustain voltage, is corrected.

Therefore, it is respectfully submitted that new independent claim 21 patentably distinguishes over the prior art.

CONCLUSION

In view of the above, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims patentably distinguish over the prior art. There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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